

REMARKS

Claims 21-24, 27, 30-32, 34-37 and 40 stand rejected under 35 U.S.C. §102(e) for anticipation by U.S. Patent No. 5,574,841 to Thompson et al. Claims 1-32 and 34-40 stand rejected under 35 U.S.C. §102(e) for anticipation by Optimal. Claims 25-26, 28, 33 and 38-39 stand rejected under 35 U.S.C. §103(a) for obviousness over the Thompson patent in view of SAGSEC or SAPS. Claim 33 stands rejected under 35 U.S.C. §103(a) for obviousness over the Optimal in view of Power Line Systems.

Applicant respectfully traverses the rejections and urges allowance of the present application.

Referring initially to claim 21, Applicant refers to page 3 of the Office Action in paragraph 12b wherein it is stated that Thompson does not teach analysis including movement of the insulators coupled with a conductor and stiffness of individual supports. Thompson fails to teach or suggest providing the first model using the data including swing information of insulators and the first model including the swing information of the insulators as defined in claim 21.

On page 14 of the Office Action it is stated that Power Line Systems uses finite element analysis that considers transverse/longitudinal swings of insulators. Referring to the Power Line Systems products, SAGSEC provides conductor modeling and SAPS provides structure modeling. Both programs SAGSEC and SAPS start with ruling span assumptions and base initial

calculations on ruling span assumptions which assume that insulators are plumb. Applicant refers to attachment A and B submitted herewith which are screen captures of PLS SAGSEC. As shown in attachment B, initial modeling starts with ruling span assumptions as indicated by the error message indicating that suspension insulators must have same tensions. PLS SAGSEC and SAPS programs begin by using ruling span assumptions and fail to teach or suggest providing the first model using the data including swing information of the insulators and the first model including the swing information of the insulators as defined in claim 21.

Optimal pertains to analysis on an individual span of a conductor. Optimal provides analysis of individual incline spans which are fixed at both ends. Referring to attachment C, such is a screen capture of Optimal stating that each conductor is annotated with its ruling span. Attachment D illustrates a screen capture of Optimal stating that ruling span values can be fixed. The Optimal product provides analysis of single incline spans with fixed terminations using ruling span assumptions and fails to model swing information of a plurality of insulators. Optimal fails to teach or suggest the providing the first model including the swing information of the insulators and the altering to provide a second model including swing information of the insulators different than the swing information of the first model as stated in claim 21.

The prior art teachings taken alone or in combination fail to teach or suggest providing data of a conductor, supports and swing information of a plurality of insulators, providing a first model including swing information of the insulators and altering initial design parameters to provide a second model including swing information of the insulators different from the swing information of the first model as defined in claim 21. Accordingly, independent claim 21 recites limitations not shown or suggested in the prior art of record. Applicant respectfully requests allowance of independent claim 21 for at least this reason.

The claims which depend from independent claim 21 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

New claim 41 defines providing data including a plurality of different tensions of the conductor in a plurality of respective spans. As set forth in attachment B, Power Line Systems SAPS and SAGSEC must have same tensions to perform initial modeling. Optimal utilizes ruling span as set forth in attachments C and D and is performed on individual incline spans. The prior art fails to teach or suggest providing data including a plurality of tensions of the conductor as defined in claim 41. Claim 41 is allowable for at least this additional reason.



Referring to claim 44, Applicant refers to page 195 of PLS CADD which is utilized to calculate clearance violations. As set forth on page 195 of PLS CADD, ruling span and plumb insulator assumptions thereof are used in PLS CADD to make all tension calculations. The prior art of record fails to teach or suggest verifying the second model including swing information of the insulators against clearances as positively recited. Claim 44 recites limitations not shown or suggested in the prior art of record. Claim 44 is allowable for at least this additional reason.

Referring to claim 38, Thompson, the PLS products, and Optimal fail to teach or suggest providing data including swing information of insulators, providing a first model including swing information of the insulators, analyzing the first model at an increased operating condition, and altering the initial design parameters to provide a second model of the existing powerline including swing information of the insulators as defined in claim 38. Claim 38 recites limitations not shown or suggested in the prior art of record. Claim 38 is in condition for allowance for at least this reason.

The claims which depend from independent claim 38 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to claim 40, Thompson, the PLS products and Optimal fail to teach or suggest the computer usable medium having code configured to

cause a processor to receive data of swing information of insulators, to provide a first model including swing information of the insulators, to analyze the first model at an increased operating condition, and to alter the initial design parameters to provide a second model of the existing powerline including swing information of the insulators as defined in claim 40. Claim 40 recites limitations not shown or suggested in the prior art of record. Claim 40 is in condition for allowance for at least this reason.

Claims 21-40 stand rejected under 35 U.S.C. §112, second paragraph for indefiniteness. Without admitting to the propriety of the indefiniteness rejections, Applicant has amended claims 21, 38, 40 to define the altering initial design parameters to provide a second model responsive to the analyzing of the first model. One of skill in the art would understand claims 21-40. Claims 21-40 are definite and are in compliance with 35 U.S.C. §112, second paragraph. Applicant respectfully requests withdrawal of the indefiniteness rejection for at least this reason.

Referring to the rejections under 35 U.S.C. §112, first paragraph, Applicant has canceled claim 29. Support for claims 31 and 32 is provided at least on page 12, lines 12-24 and page 13, lines 1-24 of the originally filed specification. Applicant submits herewith an Information Disclosure Statement. Applicant respectfully request consideration of all references disclosed in the IDS.

Applicant respectfully requests allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,

Dated: 2/28/01

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